



■ VERENIGING VAN BELGISCHE FABRIKANTEN EN IMPORTEURS VAN GRONDSTOFFEN VOOR BAKKERIJ, PATISSERIE, CHOCOLATIERS EN IJSBEREIDERS ■

unifa





# THE WORLD OF CHOCOLATE

HISTORY OF COCOA & CHOCOLATE  
FROM COCOA BEANS TO COCOA MASS &  
BUTTER

12 december 2011

# HISTORY OF COCOA & CHOCOLATE



## The birth of Cocoa

### – Central America

Olmeecs: 1500 - 400 BC The first people to use cocoa

Classic Maya: 250 - 900 AD

Toltecs: 900 - 1150 AD

Aztecs: 1150 - 1600 AD

- Theobroma: food from / for the gods: mythology, offerings
- Hot or cold drink based on cocoa and water (or wine) with corn and spices
- Used also as currency

# HISTORY OF COCOA & CHOCOLATE

1500 BC



*The birth*

1500 AD



*Conquistadores*

1650 AD to today



*Conquest of Europe*

## Spanish Conquistadors

- Columbus: first encounter in 1502
- Hernán Cortés: conquest of Mexico (as off 1517)
- Introduction of cocoa as a beverage in Spain and other countries

# HISTORY OF COCOA & CHOCOLATE

1500 BC



*The birth*

1500 AD



*Conquistadores*

1650 AD to today



*Conquest of Europe*

## Chocolate in Europe

- 1598 - 1675: Count César de Plessis-Praslin of France gave his name to “praline” a roasted almond covered with caramelised sugar
- 1828 Coenraad J. Van Houten (the Netherlands): inventor of the cocoa press and the alkalisation process
- 1879 Henri Nestlé (invents powdered milk) and Daniel Peter (invents milk chocolate)
- 1879 R. Lindt: invents the conching process
- 1912 Jean Neuhaus Jr made the 1st moulded “praline” by filling a chocolate shell with a nut-based filling



# THE WORLD OF CHOCOLATE

**History of cocoa & chocolate**

**From cocoa beans to cocoa mass & butter**

# FROM COCOA BEANS TO COCOA MASS & BUTTER

## Overview



*Tree*



*Harvest*



*Opening  
Pods*



*Fermentation*



*Drying*



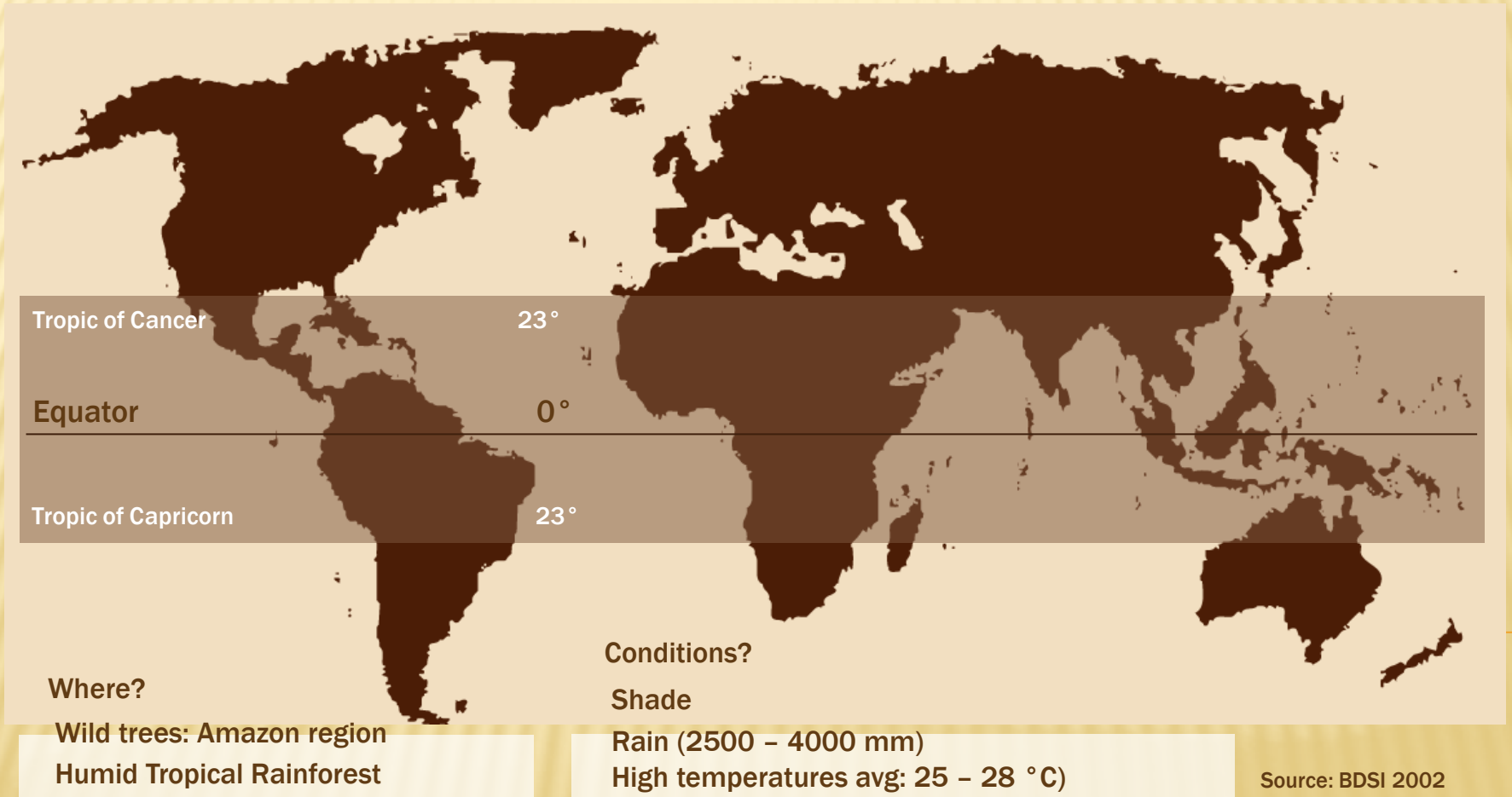
*Storage*



*Cocoa bean  
processing*

# FROM COCOA BEANS TO COCOA MASS & BUTTER

## The origin





# FROM COCOA BEANS TO COCOA MASS & BUTTER

## Tree: main cocoa varieties



### **Criollo**

- Considered best flavoured cocoa
- Light brown colour
- Aromatic flavour profile (nutty, fruity, etc.)
- Low yield, sensitive to diseases
- < 1% of world crop

### **Trinitario**

Hybrids which combine the high yield and resistance to diseases of the Forastero, and the aromatic profile of the Criollo  
<5% of world crop

### **Forastero**

- Typical strong chocolate flavour
- High yield and resistance to diseases
- 95% of world crop

# FROM COCOA BEANS TO COCOA MASS & BUTTER

## Harvest

- **1,500 Pods/Day**
- **2 crops/year**
  - main: October – February
  - mid: May – July
- **Harvesting yield**
  - avg. = 500 - 700 kg cocoa/hectare



Harvesting yield – 500-700 kg cocoa/hectare

# FROM COCOA BEANS TO COCOA MASS & BUTTER

## Opening pods

- Each pod contains between **20 and 50 seeds** which are surrounded by a **sugar rich pulp**
- 200 to 800 g



Each pod contains between 20 and 50 seeds

# FROM COCOA BEANS TO COCOA MASS & BUTTER

## Fermentation

- 5 to 7 days
- Development of the cocoa flavour
- Temperature rises to 40-45 ° C;  
Pulp liquefies and drains away
- Turning the heap or  
changing the box is important  
to provide aeration
- Browning reactions and formation of  
flavour precursors



# FROM COCOA BEANS TO COCOA MASS & BUTTER

## Drying

- 5 - 7 days
- The aim of drying is to **prevent mould growth** and successive deterioration
- Before: moisture content  $\pm 65\%$
- After: moisture  $\pm 7\%$



Before

65%

After

7%

# FROM COCOA BEANS TO COCOA MASS & BUTTER

## Storage

- **Clean places**
- **Disinfected**
- **16 degrees**
- **Quality Control**

Cut test of 100 beans:

- Insect infection
- Mould
- Fermentation degree



Cut test of 100 beans

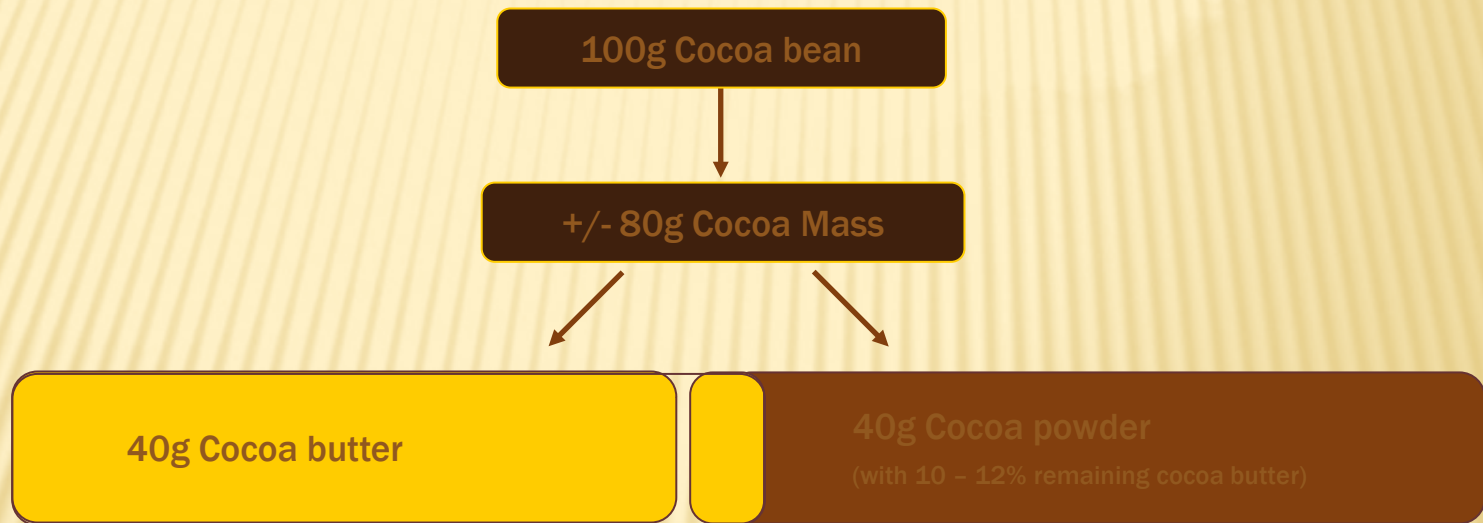
# FROM COCOA BEANS TO COCOA MASS & BUTTER

## Cocoa bean processing



# FROM COCOA BEANS TO COCOA MASS & BUTTER

## Cocoa bean processing



80g of cocoa beans produce 100g of bitter sweet dark chocolate

Typical yield of cocoa beans per hectare = 250–2000 kg (per year)

1 ton of dark chocolate requires 1.5 hectares of land





# HOW CHOCOLATE IS MADE

**Ingredients & Characteristics of chocolate**

**Production process**

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# INGREDIENTS

## Legend



cocoa butter



cocoa mass



sugar

## OPTIONAL



lecithin



milk powder



flavour

# CHARACTERISTICS OF CHOCOLATE

## Legend



Taste

Fluidity



Colour

Fineness

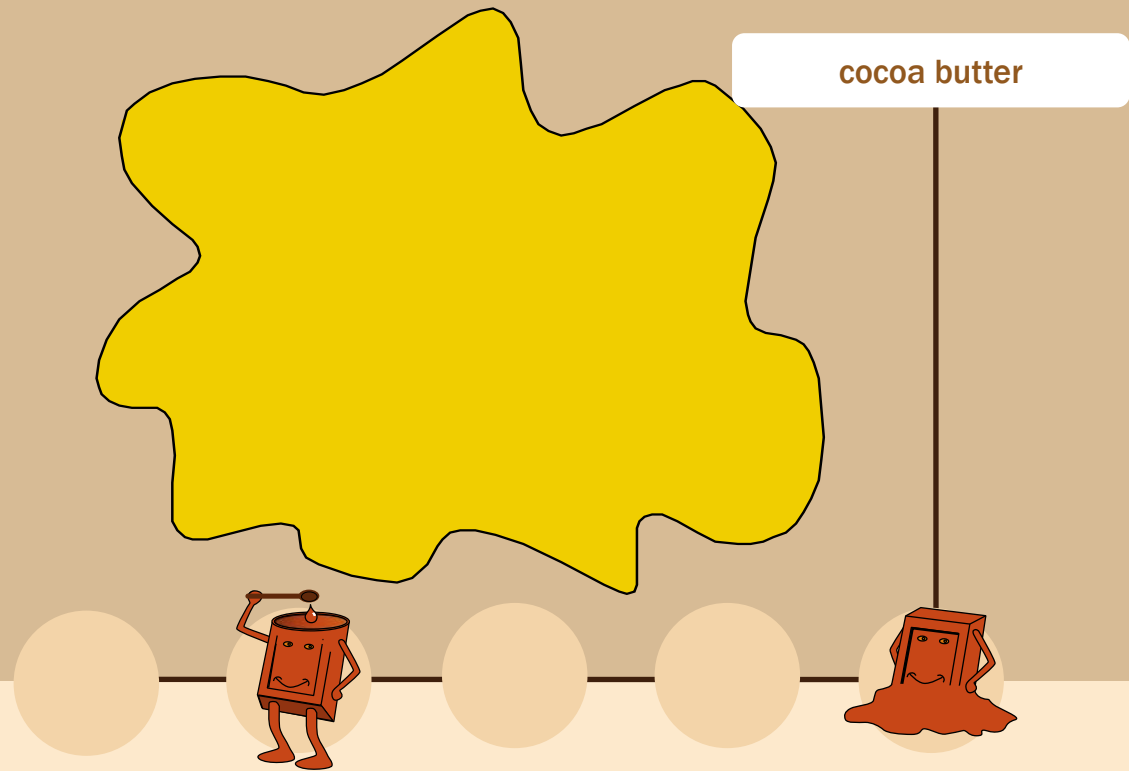


Melting behaviour

# INGREDIENTS & CHARACTERISTICS

## Cocoa Butter

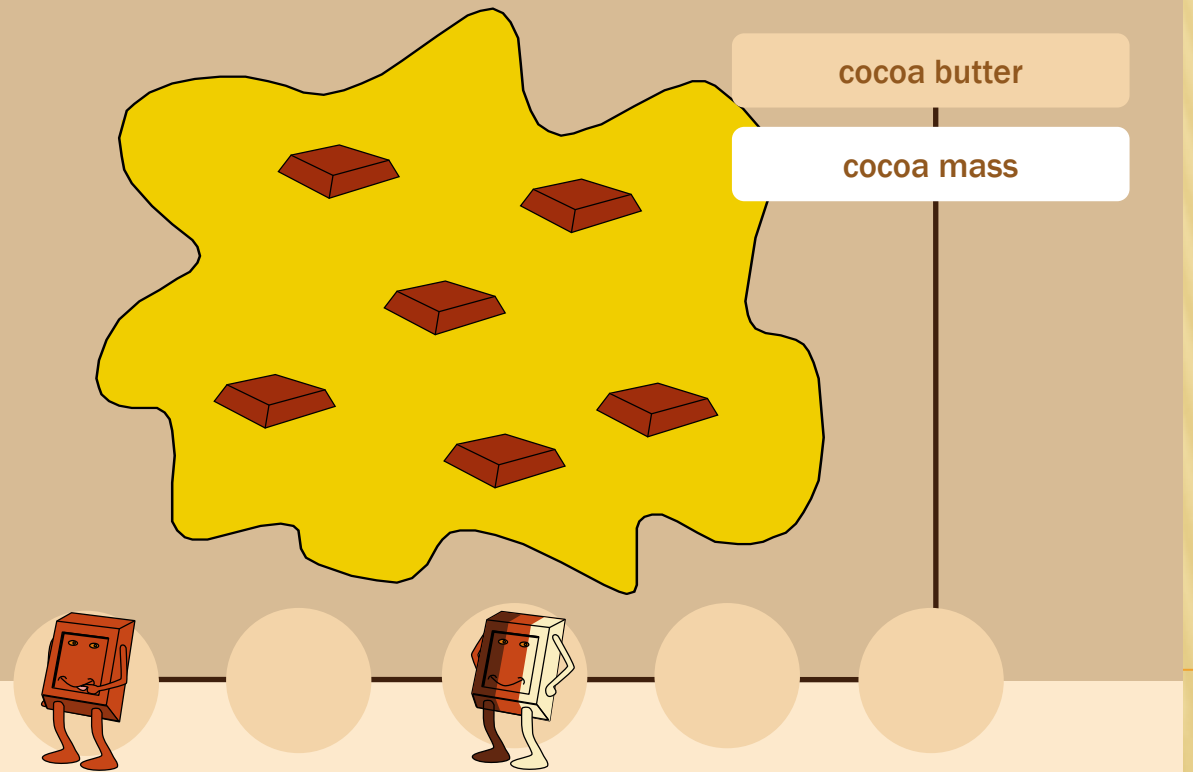
Snap  
Gloss  
Melting behaviour  
Fluidity



# INGREDIENTS & CHARACTERISTICS

## Cocoa Mass

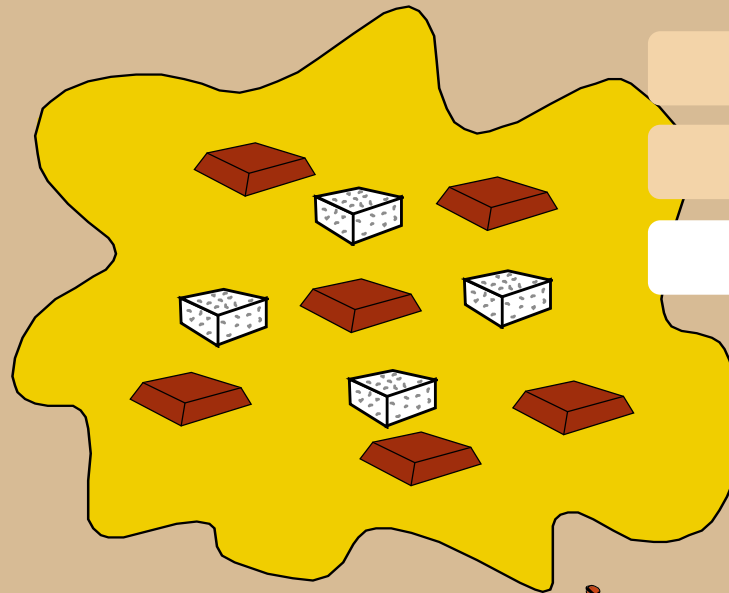
Colour  
Taste  
Cocoa butter



# INGREDIENTS & CHARACTERISTICS

Sugar (beet or cane)

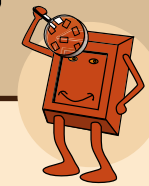
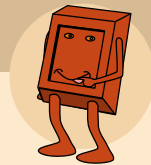
Taste  
Dry matter  
Fineness - 500 Microns



cocoa butter

cocoa mass

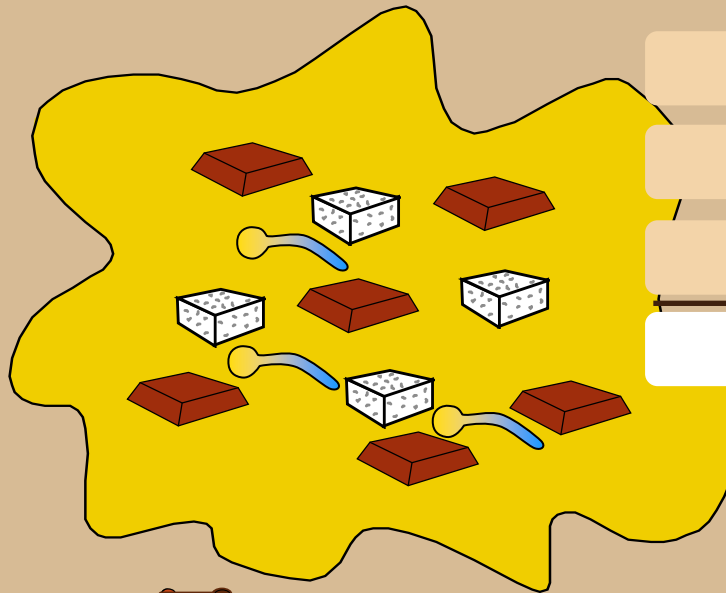
sugar



# INGREDIENTS & CHARACTERISTICS

## Lecithin (soya)

Emulsifier  
Fluidity  
Binds dry matter  
with fat



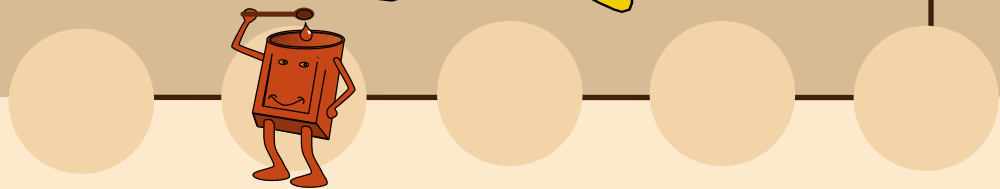
cocoa butter

cocoa mass

sugar

lecithin

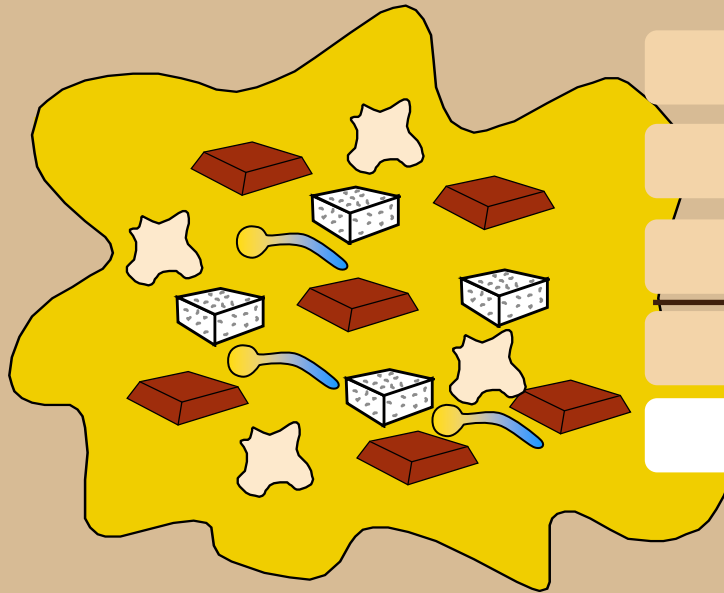
OPTIONAL



# INGREDIENTS & CHARACTERISTICS

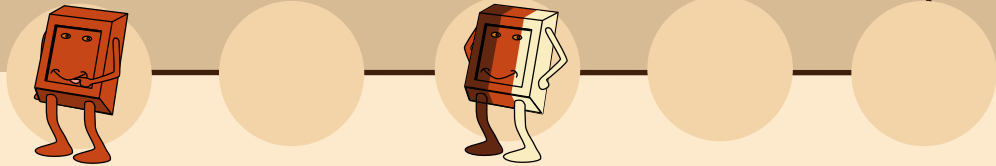
## Milk Powder

Determines taste & colour  
Basic ingredient in milk and white chocolate



- cocoa butter
- cocoa mass
- sugar
- lecithin
- milk powder

OPTIONAL

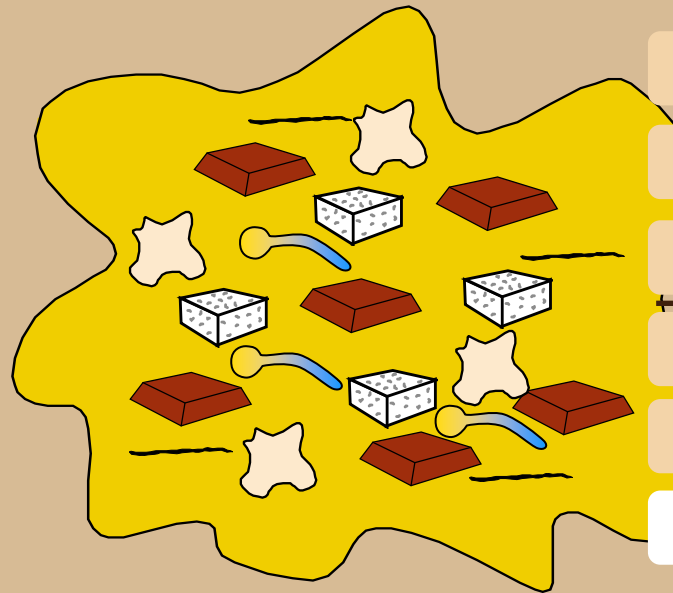




# INGREDIENTS & CHARACTERISTICS

## Flavour

100% Natural Vanilla



cocoa butter

cocoa mass

sugar

lecithin

milk powder

flavour

OPTIONAL

